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2007

### Nebraska Summary: S664 Case-IH Maxxum 155 Value

Nebraska Tractor Test Laboratory

*University of Nebraska-Lincoln*, [tractortestlab@unl.edu](mailto:tractortestlab@unl.edu)

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# SUMMARY OF OECD TEST 2428/1–NEBRASKA SUMMARY 664

## CASE IH MAXXUM 115 VALUE DIESEL

### 16 SPEED

#### POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—1037 rpm)					
111.3 (83.0)	2197	6.77 (25.61)	0.426 (0.259)	16.45 (3.24)	
Standard Power Take-off Speed (1000 rpm)					
111.2 (82.9)	2119	6.64 (25.15)	0.418 (0.255)	16.75 (3.30)	
Maximum Power - (1 hour)					
111.4 (83.1)	2098	6.63 (25.11)	0.417 (0.254)	16.80 (3.31)	
VARYING POWER AND FUEL CONSUMPTION					
111.3 (83.0)	2197	6.77 (25.61)	0.426 (0.259)	16.45 (3.24)	Air temperature
100.8 (75.2)	2348	6.53 (24.73)	0.454 (0.276)	15.43 (3.04)	68°F (19°C)
76.2 (56.8)	2361	5.43 (20.56)	0.500 (0.304)	14.02 (2.76)	Relative humidity
51.2 (38.2)	2380	4.15 (15.71)	0.568 (0.345)	12.34 (2.43)	56%
25.9 (19.3)	2407	2.95 (11.18)	0.801 (0.487)	8.76 (1.72)	Barometer
--	2430	1.95 (7.40)	--	--	28.8" Hg (97.4 kPa)
--					
Maximum Torque - 420.1 lb.-ft. (569.6 Nm) at 898 rpm					
Maximum Torque Rise - 58.0%					
Torque rise at 1800 engine rpm - 18%					

#### DRAWBAR PERFORMANCE

##### (Unballasted - Front Drive Engaged)

#### FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—9th (8B) Gear									
93.3 (69.6)	5790 (25.76)	6.04 (9.73)	2200	3.0	0.508 (0.309)	13.81 (2.72)	185 (85)	61 (16)	29.1 (98.7)
75% of Pull at Maximum Power—9th (8B) Gear									
75.8 (56.5)	4365 (19.42)	6.51 (10.47)	2350	2.3	0.588 (0.358)	11.92 (2.35)	185 (85)	61 (16)	29.1 (98.7)
50% of Pull at Maximum Power—9th (8B) Gear									
51.8 (38.6)	2945 (13.09)	6.60 (10.62)	2368	1.7	0.665 (0.405)	10.54 (2.08)	185 (85)	63 (17)	29.1 (98.7)
75% of Pull at Reduced Engine Speed—10th (10C) Gear									
75.6 (56.4)	4390 (19.54)	6.46 (10.40)	2095	2.4	0.533 (0.324)	13.15 (2.59)	185 (85)	64 (18)	29.1 (98.7)
50% of Pull at Reduced Engine Speed—10th (10C) Gear									
51.8 (38.6)	2950 (13.13)	6.58 (10.58)	2115	1.6	0.592 (0.360)	11.83 (2.33)	181 (83)	64 (18)	29.1 (98.7)

**Location of tests:** Istituto per le Macchine Agricole e Movimento Terra 73, Strada delle Cacce 10135 Torino, Italy

**Dates of tests:** October 2007 to January 2008.

**Manufacturer:** CNH Europe Holding S.A. 13, Rue Aldringen L-1118, Luxembourg

**FUEL and OIL:** Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.842 **Fuel weight** 7.01 lbs/gal (0.840 kg/l) **Oil SAE** 15W40 **API service classification** CH-4 **Transmission and hydraulic lubricant** Akcelanex Explore fluid **Front axle lubricant** Akcelanex Explore fluid

**ENGINE:** Make CNH Diesel **Type** six cylinder vertical with turbocharger and air to air intercooler **Serial No.** 431733 **Crankshaft** lengthwise **Rated engine speed** 2200 **Bore and stroke** 4.094" x 5.197" (104.0 mm x 132.0 mm) **Compression ratio** 17.5 to 1 **Displacement** 410 cu in (6728 ml) **Starting system** 12 volt **Lubrication pressure** **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

**CHASSIS:** **Type** front wheel assist **Serial No.** Z7BD02884 **Tread width** rear 56.3" (1430 mm) to 83.9" (2130 mm) front 52.2" (1325 mm) to 90.0" (2285 mm) **Wheelbase** 104.4" (2652 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (8) range operator controlled powershift **Nominal travel speeds mph (km/h)** first 1.41 (2.27) second 1.73 (2.78) third 2.11 (3.39) fourth 2.58 (4.15) fifth 3.31 (5.32) sixth 4.06 (6.53) seventh 4.94 (7.95) eighth 5.51 (8.86) ninth 6.06 (9.75) tenth 6.75 (10.87) eleventh 8.23 (13.24) twelfth 10.09 (16.24) thirteenth 12.94 (20.82) fourteenth 15.87 (25.54) fifteenth 19.32 (31.09) sixteenth 23.70 (38.14) reverse 1.39 (2.24), 1.71 (2.75), 2.08 (3.35), 2.55 (4.10), 3.27 (5.26), 4.01 (6.45), 4.88 (7.86), 5.44 (8.76), 5.99 (9.64), 6.67 (10.74), 8.13 (13.08), 9.97 (16.05), 12.78 (20.57), 15.68 (25.24), 19.20 (30.73), 23.43 (37.70) **Clutch** wet disc electro-hydraulically actuated by foot pedal **Brakes** wet disc hydraulically actuated by two foot pedals that can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1970 engine rpm or 1000 rpm at 2120 engine rpm **Unladen tractor mass** 10900 lb (4945 kg)

**NOTE:** The data on this summary was obtained from OECD report 2428 conducted on the New Holland T6030 Delta Diesel.

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturer's claim of 8813 lbs (3997 kg) three point lift capacity. The manufacture's three point lift capacity claim of 7509 lbs (3406 kg) was not verified. The performance figures on this summary were taken from a test conducted under the OECD Code II test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **2428/1**, Nebraska Summary 664, December 10, 2009.

Roger M. Hoy  
Director

M.F. Kocher  
V.I. Adamchuk  
J.A. Smith  
Board of Tractor Test Engineers

DRAWBAR PERFORMANCE									
(Unballasted - Front Drive Engaged)									
MAXIMUM POWER IN SELECTED GEARS									
Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Consumption Hp.hr/gal (kW.h/l)	Temp.°F(°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
54.3 (40.5)	10235 (45.53)	1.99 (3.20)	2342	13.8	3rd(3A) Gear 0.830 (0.505)	8.44 (1.66)	187 (86)	63 (17)	29.2 (98.8)
65.6 (48.9)	10090 (44.88)	2.44 (3.92)	2336	13.6	4th(4A) Gear 0.701 (0.426)	10.00 (1.97)	185 (85)	57 (14)	29.1 (98.7)
83.4 (62.2)	10015 (44.55)	3.12 (5.03)	2329	13.2	5th(5B) Gear 0.552 (0.336)	12.69 (2.50)	185 (85)	61 (16)	29.1 (98.7)
96.4 (71.9)	9860 (43.86)	3.67 (5.90)	2073	6.8	6th(6B) Gear 0.479 (0.292)	14.62 (2.88)	181 (83)	59 (15)	29.1 (98.7)
94.1 (70.2)	7600 (33.81)	4.64 (7.47)	2094	4.1	7th(7B) Gear 0.493 (0.300)	14.21 (2.80)	185 (85)	63 (17)	29.1 (98.7)
97.0 (72.3)	6915 (30.75)	5.26 (8.47)	2120	3.6	8th(9C) Gear 0.479 (0.292)	14.62 (2.88)	183 (84)	61 (16)	29.1 (98.7)
94.8 (70.7)	6190 (27.53)	5.74 (9.25)	2093	3.1	9th(8B) Gear 0.490 (0.298)	14.31 (2.82)	185 (85)	59 (15)	29.1 (98.7)
96.0 (71.6)	5565 (24.75)	6.47 (10.41)	2106	2.8	10th(10C) Gear 0.485 (0.295)	14.47 (2.85)	185 (85)	59 (15)	29.1 (98.7)
92.0 (68.6)	4365 (19.42)	7.90 (12.72)	2099	2.1	11th(11C) Gear 0.505 (0.307)	13.87 (2.73)	181 (83)	61 (16)	29.1 (98.7)
90.3 (67.3)	3465 (15.42)	9.77 (15.72)	2102	1.5	12th(12C) Gear 0.515 (0.313)	13.60 (2.68)	185 (85)	59 (15)	29.1 (98.7)

TRACTOR SOUND LEVEL WITHOUT CAB	Front Wheel Drive	
	Disengaged dB(A)	Engaged dB(A)
At no load in 7th (7B) gear	85.5	85.6
Bystander	--	--

**TIRES AND WEIGHT**

**Rear tires** - No.,size, ply & psi(kPa)  
**Front tires** - No.,size, ply & psi(kPa)  
**Height of Drawbar**  
**Static Weight with operator**- Rear  
- Front  
- Total

**Tested Without Ballast**

Two 600/65R38; \*\*,12 (80)  
Two 480/65R28; \*\*,12 (80)  
22.0 in (560 mm)  
6745 lb (3060 kg)  
4320 lb (1960 kg)  
11065 lb (5020 kg)

## HYDRAULIC PERFORMANCE

CATEGORY: II

Quick Attach: None

OECD Static test

lift assist cylinders

Maximum force exerted through whole range: 6450 lbs (28.7 kN) (2 x 50 mm)

i) Opening pressure of relief valve: NA

Sustained pressure of the open relief valve: 2610 psi (180 bar)

ii) Pump delivery rate at minimum pressure: 17.1 GPM (64.8 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 15.2 GPM (57.4 l/min)

Delivery pressure: 2320 psi (160 bar)

Power: 20.5 HP (15.3 kW)

## THREE POINT HITCH PERFORMANCE

Observed Maximum Pressure psi. (bar)	2610 (180)
Location:	lift cylinder
Hydraulic oil temperature: °F (°C)	150 (66)
Location:	hydraulic sump
Category:	II
Quick attach:	None

**SAE Static Test**—System pressure 2350 psi (162 Bar)  
lift assist cylinders - 2 x 50 mm

Hitch point distance to ground level in. (mm)	7.9 (200)	14.2 (360)	23.0 (585)	27.4 (695)	34.4 (875)
Lift force on frame lb	10950	9620	9060	9330	7800
" " " " " " (kN)	(48.7)	(42.8)	(40.3)	(41.5)	(34.7)

	OECD test		SAE test	
	inch	mm	inch	mm
A	27.6	702	28.1	715
B	10.0	255	10.0	255
C	15.6	395	15.6	395
D	14.6	370	14.6	370
E	7.9	200	9.8	250
F	9.3	235	9.3	235
G	32.3	820	32.3	820
H	1.0	25	1.0	25
I	16.9	430	15.6	395
J	23.0	585	23.0	585
K	19.9	505	23.0	585
L	44.0	1118	44.0	1118
M	22.2	563	22.2	563
N	37.4	950	37.4	950
O	7.9	200	7.9	200
P	47.0	1195	42.0	1068
Q	33.5	850	31.3	795
R	30.2	768	32.3	820

